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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/720,172

11/25/2003

Ronald Ralph Cairo

839-1459

4331

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7590

06/08/2006

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EXAMINER

JIMENEZ, MARC QUEMUEL

ART UNIT

PAPER NUMBER

3726

DATE MAILED: 06/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/720,172	Applicant(s) CAIRO, RONALD RALPH	
	Examiner Marc Jimenez	Art Unit 3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/16/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 16,18 (see the description of figure 2 in paragraphs [0013] and [0014] of the specification). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. **Claims 4, 5, 13 and 14** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 4 recites that a flange is formed on one edge of the adapter sleeve. It is therefore, unclear how the interlocking mechanism is secured between the core and adapter sleeve as recited in claim 1.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 1, 6, and 7** are rejected under 35 U.S.C. 102(b) as being anticipated by Aitken (US1114426).

Aitken teaches a core mandrel **a** having an outside diameter, at least one adapter sleeve **b**

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having an inside diameter sized to engage the core mandrel **a** outside diameter, and an interlocking mechanism **f** secured between the core mandrel **a** and the at least one adapter sleeve **b**, the interlocking mechanism **f** preventing the at least one adapter sleeve **b** from rotating relative to the core mandrel **a**.

Regarding claims 6 and 7, the adapter sleeve **b** is “configured to” serve as an interface connection and to serve as an intermediate expansion rate medium.

7. **Claims 1-3 and 6-8** are rejected under 35 U.S.C. 102(b) as being anticipated by Byung-Gie et al. (US5558610).

Byung-Gie et al. teach a core mandrel **1** having an outside diameter, at least one adapter sleeve **20,21,3** having an inside diameter sized to engage the core mandrel outside diameter, and an interlocking mechanism **5** secured between the core mandrel **1** and the at least one adapter sleeve **3**, the interlocking mechanism **5** preventing the at least one adapter sleeve **3** from rotating relative to the core mandrel **1**.

Regarding claims 2-3, the interlocking mechanism **5** comprises a lug. Note the slot **6a**.

Regarding claims 6 and 7, the adapter sleeve **3** is “configured to” serve as an interface connection and to serve as an intermediate expansion rate medium.

Regarding claim 8, note the plurality of adapter sleeves **3,21,20** having varying exterior dimensions.

8. **Claims 1 and 6-9** are rejected under 35 U.S.C. 102(b) as being anticipated by Shimoda (US6468193).

Shimoda teaches a core mandrel **3** having an outside diameter, at least one adapter sleeve **7,5,4** having an inside diameter sized to engage the core mandrel outside diameter, and an interlocking mechanism **6** secured between the core mandrel **3** and the at least one adapter sleeve **7,5,4**, the interlocking mechanism **6** preventing the at least one adapter sleeve **7,5,4** from rotating relative to the core mandrel **3**.

Regarding claims 6 and 7, the adapter sleeve **7,5,4** is “configured to” serve as an interface connection and to serve as an intermediate expansion rate medium.

Regarding claim 8, note the plurality of adapter sleeves **7,5,4** having varying exterior dimensions.

Regarding claim 9, the adapter sleeve **4** is made of tool steel (col. 3, line 5).

9. **Claims 10-12 and 15-16** rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Byung-Gie et al.

Byung-Gie et al. teach that the sleeve **20,21,3** could be made of a number of materials including ultra-hard alloy, ceramic, or hard alloy (col. 1, lines 19-23). The core mandrel **1** is made of metal. Therefore, if the sleeve is made of ceramic, it would have a thermal expansion rate lower than that of the core mandrel. Alternatively, official notice is taken that it was well known to a person of ordinary skill in the art, at the time of the invention, to have provided a sleeve having a lower thermal expansion rate than the core material, in order to provide a sleeve that can withstand high temperatures during use.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. **Claims 4, 5, 13 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Byung-Gie et al. in view of Brindley (US2005885).

Byung-Gie et al. teach the invention cited above with the exception of having a flange having a connector.

Brindley teaches an alternative way to fasten a sleeve to a mandrel by using a flange **21** having a connector **23**.

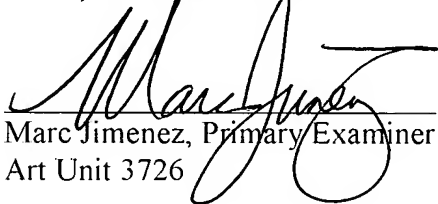
Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Byung-Gie et al. with a flange having a connector, in light of the teachings of Brindley, in order to more securely fasten the sleeve to the core.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Jimenez whose telephone number is (571) 272-4530. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Marc Jimenez, Primary Examiner
Art Unit 3726

MJ

6-5-06